

Amendment

Please cancel claims 1 and 2, and amend the remaining claims as follows (additions are underlined and deletions are enclosed in brackets):

2 3. (Amended) The coated nanocrystal of claim [1] 24, wherein the spectral range is not greater than about 40 nm [at] full width at half max (FWHM).

3 4. (Amended) The coated nanocrystal of claim [1] 24, wherein the spectral range is not greater than about 30 nm [at] full width at half max (FWHM).

4 5. (Amended) The coated nanocrystal of claim [1] 24, wherein the coated nanocrystal exhibits photoluminescence having quantum yields of greater than 30%.

5 6. (Amended) The coated nanocrystal of claim [1] 2, wherein the coated nanocrystal exhibits photoluminescence having quantum yields in the range of about [30] 30% to 50%.

11 7. (Amended) The coated nanocrystal of claim [2] 25, wherein the coated nanocrystal exhibits less than a 5% rms deviation in [size] diameter of the core.

13 8. (Amended) The coated nanocrystal of claim [1 or 2] 24 or 25, wherein the overcoating comprises [one to two monolayers] greater than about 0 to about 5.3 monolayers of [ZnY] the second semiconductor material.

6 9. (Amended) The coated nanocrystal of claim [1] 24, wherein the [narrow] spectral range is selected from the spectrum in the range of about 470 nm to about 620 nm.

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10 (Amended) The coated nanocrystal of claim [2] 1 or 25, wherein the [particle size] diameter of the core is [selected from] in the range of about 20 \AA to about 125 \AA .

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11 (Amended) The coated nanocrystal of claim [1 or 2] 24 or 25, wherein the nanocrystal further comprises an organic layer on the nanocrystal outer surface.

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18 (Amended) The coated nanocrystal of claim 11, wherein the organic layer [is comprised of moieties] comprises a moiety selected to provide compatibility with a suspension medium.

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18 (Amended) The coated nanocrystal of claim 11, wherein the organic layer [is comprised of moieties] comprises a moiety selected to exhibit affinity for the outer surface of the nanocrystal.

Please add the following new claims.

24 (New) A coated nanocrystal capable of light emission, comprising:

a core comprising a first semiconductor material, said core being a member of a monodisperse particle population; and

an overcoating uniformly deposited on the core comprising a second semiconductor material,

wherein the first semiconductor material and the second semiconductor material are the same or different,

and wherein the monodisperse particle population is characterized in that when irradiated the population emits light in a spectral range of no greater than about 60 nm full width at half max (FWHM).

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25 (New) A coated nanocrystal capable of light emission, comprising:

a core comprising a first semiconductor material, said core being a member of a monodisperse particle population; and

an overcoating uniformly deposited on the core comprising a second semiconductor material,

wherein the first semiconductor material and the second semiconductor material are the same or different,

and wherein the monodisperse particle population is characterized in that it exhibits no more than about a 10% rms deviation in the diameter of the core.

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26. (New) The coated nanocrystal of claim ¹~~24~~ or ¹⁰~~25~~, wherein the first semiconductor material is selected from the group consisting of CdS, CdSe, CdTe, and mixtures thereof.

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27. (New) The coated nanocrystal of claim ²²~~26~~, wherein the second semiconductor material is selected from the group consisting of ZnS, ZnSe, CdS, CdSe, and mixtures thereof.

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28. (New) The coated nanocrystal of claim ¹~~24~~ or ¹⁰~~25~~, wherein the second semiconductor material is selected from the group consisting of ZnS, ZnSe, CdS, CdSe, and mixtures thereof.

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29. (New) The coated nanocrystal of claim ¹~~24~~ or ¹⁰~~25~~, wherein the first semiconductor material is CdSe and the second semiconductor material is ZnS.

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30. (New) The coated nanocrystal of claim ¹~~24~~ or ¹⁰~~25~~, wherein said coated nanocrystal is a member of a substantially monodisperse particle population.

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31. (New) The coated nanocrystal of claim ¹~~24~~, wherein the monodisperse particle population is characterized in that it exhibits no more than about 10% rms deviation in the diameter of the core.

A

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B

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~~32~~ (New) The coated nanocrystal of claim ⁷~~31~~, wherein the monodisperse particle population is characterized in that it exhibits no more than about 5% rms deviation in the diameter of the core.

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~~33~~ (New) The coated nanocrystal of claim ⁸~~6~~, wherein the overcoating comprises less than about one monolayer of the second semiconductor material.

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~~34~~ (New) The coated nanocrystal of claim ⁸~~6~~, wherein the overcoating comprises in the range of about one to about two monolayers of the second semiconductor material.

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~~35~~ (New) The coated nanocrystal of claim ²⁵~~29~~, wherein the overcoating comprises greater than about 0 to about 5.3 monolayers of the second semiconductor material.

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~~36~~ (New) The coated nanocrystal of claim ²⁶~~35~~, wherein the overcoating comprises less than about one monolayer of the second semiconductor material.

²⁹
~~37~~ (New) The coated nanocrystal of claim ²⁶~~35~~, wherein the overcoating comprises in the range of about one to about two monolayers of the second semiconductor material.

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~~38~~ (New) The coated nanocrystal of claim ⁸~~6~~, wherein the second semiconductor material is ZnS or ZnSe.

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~~39~~ (New) The coated nanocrystal of claim ¹³~~33~~, wherein the second semiconductor material is ZnS or ZnSe.

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~~40~~ (New) The coated nanocrystal of claim ²⁶~~35~~, wherein the second semiconductor material is ZnS or ZnSe.

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